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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/757,175
Filing Date: January 09, 2001
Appellant(s): LU ET AL.

Rick James
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/16/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of the Claimed Subject Matter

The summary of invention contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the issues in the brief is correct.

(7) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Prior Art of Record

4,758,462	Park et al.	7-1988
5,443,915	Wilkie et al.	8-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3-5, 29, 31-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US 4758462) in view of Wilkie et al. (US 5443915).

Park's invention is directed to an opaque, biaxially oriented multilayer film comprising a thermoplastic polymer voided core layer, and at least one void-free thermoplastic skin layer affixed to a surface of the core layer (Abstract). Park also teaches that by adding a light absorbent colored pigment in the nonexpanded (void-free) skin, the light transmission of the film is reduced, i.e., the opacity is increased; and any suitable light absorbent colored pigment may be used (column 3, lines 38-61). The pigment particles may be added to the core only, to the skins only or to one skin only, or to any combination of the above (column 5, lines 62-66).

For claims 1, 3, 4, 31-36 and 38, Park lacks a teaching that the multilayered opaque film is substantially void-free in each layer. However, it is noted that Wilkie's invention is directed to an oriented multilayer film having a white-opaque layer (Abstract). Wilkie teaches that white oriented polypropylene films have traditionally been produced using a cavitated (voided) core in order to achieve opacity, and the voided core weakens the core layer (column 1, lines 25-29). Wilkie also expressly teaches that when the polymeric layer has a lower melting temperature than isotactic polypropylene homopolymer, such as a ethylene-propylene random copolymer, an oriented film, with titanium dioxide dispersed therein, does not have an extensive cavitations and voids, i.e., substantially void-free. The oriented non-cavitated (void-free) film is advantageous, because cavities (i.e., voids) reduce mechanical strength of the film (column 4, lines 45-56). As such, in the absence of unexpected results, it would

have been obvious to one of ordinary skill in the art to substitute Park's voided opaque core layer with a layer of oriented, titanium dioxide opacified, substantially void-free polymer of a lower melting temperature (lower than isotactic polypropylene homopolymer), as taught by Wilkie, motivated by the desire to obtain an opaque multilayer film with improved mechanical strength.

For claims 5 and 29, although Wilkie lacks an express teaching of an opaque layer comprising isotatic polypropylene or high density polyethylene, or linear low density polyethylene (LLDPE), Wilkie does expressly teach that the criteria for forming a titanium dioxide opacified oriented polymer film is to select a polymer which has a melting temperature lower than isotactic polypropylene homopolymer, as set forth above. As such, since polymers such as blends of isotatic propylene/polyethylene, HDPE or LLDPE all inherently have lower melting temperatures than isotactic polypropylene homopolymer, in the absence of unexpected results, it is would have been obvious to one of ordinary skill in the art of thermoplastic films to select one of the aforementioned polymers for forming an oriented, titanium dioxide opacified, substantially void-free film layer, as taught by Wilkie, motivated by the desire to obtain an opague film with improved mechanical properties.

For claim 36, the Examiner repeats that Park teaches that by adding a light absorbent colored pigment in the nonexpanded (void-free) skin, the light transmission of the film is reduced, i.e., the opacity is increased, as set forth above. Since a pigment is simply an additive, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to adjust the amount of pigment additive in the polymer

film layer, motivated by the desire to obtain a suitable amount of opacity or light transmission to meet application requirements.

(10) Response to Argument

With respect to Appellants' argument "Wilkie teaches a film structure containing a core layer and a cold seal receptive layer. Wilkie's core layer is "transparent"" (Brief, page 10, bottom paragraph), the Examiner notes that the aforementioned embodiment relates to a 2 layer polyolefin film, while Wilkie identify one layer as "receptive layer", and the other layer as "core layer", since it is a simple 2-layer structure, clearly Appellants' argument is semantic, because physically their structural relation in a composite film is equivalent.

With respect to Appellants' argument "Wilkie specifically teaches that the layer with which the Examiner proposes to replace Park's core layer is not opaque. Wilkie teaches that the particular layer ***appears*** opaque in the context of a film structure that includes the particular layer as a skin layer in combination with a transparent core layer and a metallized backside layer. There is no teaching in Wilkie, and thus no reasonable expectation of success from Wilkie, that the particular layer would also ***appear opaque*** if it were to be used as the core layer of a film." (Brief, page 11, second paragraph from bottom), the Examiner repeats that Wilkie expressly teaches an oriented multilayer film having a white-opaque layer (Abstract). Further, Wilkie explicitly explains that the white pigment (i.e., titanium dioxide) containing white-partially opaque receptive layer in cooperation with the metallization gives a strong white-opaque appearance (column 1, lines 10-15; column 3, lines 43-47). Clearly, while Wilkie teaches that the metallization

produce an enhanced white-opaque appearance of the composite film, Wilkie also explicitly teaches that the titanium dioxide containing layer is a white-opaque layer, Appellants' argument to the contrary notwithstanding.

With respect to Appellants' argument "In the present case, replacing the core layer of Park by the cold seal receptive skin layer of Wilkie does not teach or suggest the claimed opaque layer" (Brief, page 12, fifth paragraph), the Examiner repeats that Appellants appear to again argue the structure of the film semantically, it should be noted that while Wilke identifies the opaque layer as "cold seal receptive skin layer", and the other transparent layer as "core layer", it is a simple 2-layer film, and physically their structural relation in a composite film is equivalent. In particular, it should also be noted that additional layers (cold seal adhesive and metallization layer) are disposed over the outer surfaces of the 2-layer structure, so neither layer of Wilkie's initial 2-layer film is an outer (or skin) layer in the final composite film.

With respect to Appellants' argument "It is only with the benefit of the present disclosure that a person of ordinary skill in the art would understand that an opaque ***core layer*** can be provided which is substantially free of voids." (Brief, page 12, sixth paragraph), the Examiner notes that Appellants appears to argue that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. In particular, the Examiner repeats that the combined teachings of Parker and Wilkie does render obvious all the elements of instant invention to one of ordinary skill in the art of opaque films, Appellants' argument to the contrary notwithstanding.

Finally, with respect to Appellants' argument "proposed combination of Park and Wilkie is improper because a proposed modification or combination of the prior art cannot change the principle of operation of the prior art invention being modified ... modifying Park by reference to Wilkie changes Park's principle of operation, which is the provision of a void-containing core layer." (Brief, pages 12-13, bridging paragraph), the Examiner notes that Appellants appear to be arguing "void-containing" is a necessary and only means to obtain an "opaque layer", and fails to recognize that the Wilkie's "void-free opaque layer" provides an alternative means to obtain opaqueness in a film, and in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to substitute Park's voided opaque core layer with a layer of oriented, titanium dioxide opacified, substantially void-free polymer, as taught by Wilkie, motivated by the desire to obtain an opaque multilayer film with improved mechanical strength. In other words, Park and Wilkie are from the same field of endeavor, i.e., opaque multilayer film, and it would have been obvious to one of ordinary skill in the art to combine their teachings; further, the modification of Park reference in view of Wilkie

also preserves the principle of operation, because the resulting film remains to be functioning as an opaque multilayer film, Appellants' argument to the contrary notwithstanding.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Examiner
Art Unit 1771

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March 30, 2005

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